

**PHASE SHIFTING OF NEUROLOGICAL
SIGNALS IN A MEDICAL DEVICE SYSTEM**

ABSTRACT

Method and apparatus for phase shifting neurological signals received from monitoring elements of a medical device. The medical device comprises a plurality of monitoring elements each receiving a neurological signal. The device processes the neurological signals identify a time shift of the neurological signal relative to each other. The neurological signals are then time shifted according to the time shift upon which the signals are utilized to provide closed-loop feedback control of a treatment therapy.